

IN THE CLAIMS:

1. – 7. (CANCELLED)

8. (CURRENTLY AMENDED) A bearing assembly for use in an apparatus comprising:

a first bearing having an inner race and an outer race;

a first bearing cup disposed at least partially around the first bearing and secured to the outer race thereof, the first bearing cup having at least one tang ~~extending out from the first bearing cup, the tang adapted~~ to interface with a portion of the apparatus to prevent the first bearing cup from rotating while allowing the first bearing cup ~~and with thus the first~~ bearing to move in an axial direction; ~~and~~

a second bearing having an inner and an outer race; and

a second bearing cup disposed at least partially around the second bearing and secured to the outer race thereof, the second bearing cup ~~interlocking-engaged~~ with the first bearing cup such that ~~the first bearing cup allows only a predetermined limited amount of rotational movement of the second bearing cup, while allowing and a predetermined degree of axial movement of the second bearing cup relative to and~~ is permitted between the second bearing cup relative to and the first bearing cup.

9. (CANCELLED)

10. (CURRENTLY AMENDED) The bearing assembly of claim 8, wherein the bearing cups each include at least one tooth and at least one slot, the tooth of the first bearing cup disposed within the slot of the second bearing cup and the tooth of the second bearing cup disposed within the slot of the first bearing cup.

11. (CURRENTLY AMENDED) The bearing assembly of claim 10, wherein the slots are larger than the teeth such that the teeth may partially rotate therein to provide the predetermined rotational movement.

12. (CURRENTLY AMENDED) The bearing assembly of claim 11, wherein the bearing cups are generally ring shaped and each ~~include~~includes a shoulder extending radially inward from an inner surface thereof, the shoulders abutting the outer races to align the bearing cups ~~onto~~ to the respective bearings.

13. (CURRENTLY AMENDED) The bearing assembly of ~~claim 12~~claim 8, further comprising a generally planar spring disposed between the bearings and the bearing cups to preload the bearings, the generally planar spring ~~sandwiched between the shoulders of the~~ in contact with both bearing cups.

14. (CURRENTLY AMENDED) The bearing assembly of ~~claim 13~~claim 12, wherein the bearing cups each include a plurality of teeth disposed within a plurality of slots to form an interlocking mesh, and wherein the generally planar spring is protected between the shoulders and the interlocking teeth of the bearing cups.

15. (CURRENTLY AMENDED) The bearing assembly of claim ~~14~~14, further comprising a shim disposed between the inner races of the bearings to space the bearings apart from one another.

16. (CURRENTLY AMENDED) The bearing assembly of 8, wherein the first and second bearing exp cups ~~is~~are secured to the respective first and second outer race of the first bearing by heating the first bearing cup and chilling the first bearing such that through an interference fit ~~is formed between the first bearing cup and the outer race of the first bearing.~~

17-25. (CANCELLED)

26. (CURRENTLY AMENDED) A bearing assembly comprising:

a first inner race defined about an axis;

a first outer race defined about the axis;

a plurality of first rolling elements disposed between said first inner and outer races;

a first bearing cup ~~secured to~~ mounted at least partially about the first outer race and having a ~~portion tang projecting therefrom for engaging adapted to interface within a recess in~~ with a structure in which said bearing assembly is located[[,]] ~~to thus prevent said the first bearing cup from rotating while allowing the first bearing cup to move in an axial direction along~~ a longitudinal axis of the bearing assembly; and

a second inner race defined about the axis;

a second outer race defined about the axis;

~~a secondary bearing cup having a secondary inner race, a secondary outer race and a plurality of secondary~~ second rolling elements disposed between the second inner race and outer secondary races,

~~the a secondary~~ second bearing cup being disposed around mounted at least partially about the secondary second outer race and having a plurality of ~~secondary teeth engaged with the first bearing cup plurality of slots such that a predetermined rotational movement and a predetermined axial movement is permitted between the second bearing cup and the first bearing cup; and~~

~~wherein the first outer race includes a plurality of slots, the secondary teeth of the secondary bearing cup engaging with the slots so that the first bearing cup prevents rotation of the secondary bearing cup while allowing relative axial movement therebetween; and~~

a generally planar biasing spring disposed axially between said first inner and outer races and the second inner and outer races to provide a predetermined axial pre-loading force to the rolling elements in contact with both said first bearing cup and said second bearing cup to provide an axial preload therebetween.

27. (CANCELLED)

28. (CURRENTLY AMENDED) The bearing assembly of claim 26, wherein the first bearing cup includes a multiple of slots and said second bearing cup includes a multiple of teeth, each of the plurality of the slots are larger than the secondary each of the plurality of teeth to enable the secondary teeth to rotate move therein within the slots to provide the predetermined rotational movement.

29. (CURRENTLY AMENDED) The bearing assembly of claim ~~28~~26, wherein ~~the first bearing cup includes a plurality of teeth spaced apart by slots, the teeth of the first bearing cup engaging between the secondary teeth of the secondary bearing cup to prevent rotation between the first bearing cup and the secondary bearing cup~~ the predetermined rotational movement is essentially prevented.

30-31. (CANCELLED)

32. (PREVIOUSLY PRESENTED) The bearing assembly of claim 26, wherein the first and secondary rolling elements comprise balls.

33. (CURRENTLY AMENDED) A bearing assembly comprising:

a first inner race;

a first outer race;

~~a first plurality of rolling elements disposed between the first inner and outer races;~~

a first bearing cup ~~secured to~~ mounted at least partially about the first outer race, the first bearing cup including a projecting structural element for engaging within a recess of a structure in which said bearing assembly is disposed, and a plurality of first teeth;

~~a first plurality of rolling elements disposed between the first inner and outer races;~~

a second inner race;

a second outer race;

~~a second plurality of rolling elements disposed between the second inner and outer races;~~

a second bearing cup ~~secured to~~ mounted at least partially about the second outer race, the second bearing cup including a plurality of second teeth, said plurality of first teeth engaged with said plurality of second teeth such that a predetermined rotational movement and a predetermined axial movement is permitted between the second bearing cup and the first bearing cup; and

~~a second plurality of rolling elements disposed between the second inner and outer races;~~
and

~~said projecting structural element preventing rotation of said first bearing cup within said structure while allowing axial movement of said first bearing cup, and said teeth of each of said first and second bearing cups engaging such that said second bearing cup is allowed only a predetermined amount of rotational movement before said second bearing cup is prevented from rotating relative to said first bearing cup.~~

a generally planar biasing spring in contact with both said first bearing cup and said second bearing cup to axially preload said first bearing cup relative said second bearing cup.

34. (CURRENTLY AMENDED) The bearing assembly of claim 33, ~~further comprising~~
a wherein said generally planar spring is disposed axially between said first outer race and said second outer race[.]] for biasing said rolling elements against said first and second inner races, and thus providing a pre-load force to said rolling elements.

35. (CURRENTLY AMENDED) The bearing assembly of claim 33, wherein said first bearing cup includes a plurality of circumferentially arranged slots around a perimeter portion thereof for engaging with the plurality of second teeth of said second bearing cup; ~~and wherein said second bearing cup includes a plurality of circumferentially arranged slots around a perimeter portion thereof for engaging with the plurality of first teeth of said first bearing cup; while permitting axial movement between said first and second bearing cups.~~

36. (CANCELLED)

37. (NEW) The bearing assembly of claim 33, wherein said generally planar spring is a Belleville washer.

38. (NEW) The bearing assembly of claim 33, wherein said generally planar spring is a cylindrical beam spring.

39. (NEW) The bearing assembly of claim 33, wherein said generally planar spring is a Belleville spring.

40. (NEW) The bearing assembly of claim 26, wherein said generally planar spring is a Belleville washer.

41. (NEW) The bearing assembly of claim 26, wherein said generally planar spring is a cylindrical beam spring.

42. (NEW) The bearing assembly of claim 26, wherein said generally planar spring is a Belleville spring.